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# FIELDIANA

## Anthropology

Published by Field Museum of Natural History

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New Series, No. 2

### AN ANALYSIS OF SANTA MARÍA URN PAINTING AND ITS CULTURAL IMPLICATIONS

RONALD L. WEBER

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Field Museum of Natural History*

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## INTRODUCTION

For archaeologists who work in northwest Argentina, the Santa María style is a well-known mark of the late prehistoric period, but little information has appeared that relates the style to the people who produced it. The known artifacts generally lack good archaeological context; however, careful analysis permits the identification of regular patterns. Such patterns are culturally significant and can be interpreted through ethnographic analogy. The subject of this study is the patterning that occurs in Santa María urn painting and its cultural implications.

Stone architecture, including fortifications, storage units, and habitation areas, is well reported in the literature, but by far the greatest efforts of researchers have been directed toward the discovery of cemeteries and the recovery of burial urns. The anthropomorphic urns are decorated with painted step frets, zigzags, and a variety of zoomorphic designs. The analysis presented in this paper shows that designs on the necks of urns correspond to face painting, whereas designs on the bodies of urns seem to relate to fabric patterns on clothing.

The latest Santa María urns were clearly made under the influence of the Inca during the occupation of northwest Argentina in the last half of the 15th century (Weber, 1978). There is reason to assume that the Diaguita, who were inhabiting the area in the late 16th century, were the descendants of the makers of the urns (Márquez Miranda 1963, pp. 637-654). Diaguita culture did not survive to be recorded by ethnographers, but ethnohistorical and archaeological records provide documentation of their culture.

The Diaguita were settled agriculturalists who planted crops on terraced slopes, used llamas as beasts of burden, and made small tools and ornaments of gold, silver, and copper. Chiefs held political power over single villages, and alliances between villages are believed to have occurred only during the period

of aggressive warfare with Spain (Márquez Miranda 1963, p. 651). It seems probable that such alliances would also have occurred during their defense against the Inca conquest. Inter-village trade is evidenced by the distribution of nearly identical burial urns in several villages. Most likely specialized potters produced the urns.

Márquez Miranda states that long cotton tunics were the characteristic form of men's dress; he refers to Nicolas del Techo when he states that "women's clothes varied according to their status" (Márquez Miranda 1963, p. 641). Analysis of the designs on the bodies of urns confirms this distinctness of men's and women's dress.

## METHODOLOGY

Certain assumptions about the nature of culture and culture change are accepted by the author of this paper. The first of these is that cultures change as they are traced through the dimensions of time and space. This assumption requires that the noncultural dimensions, space and time, be narrowly defined before one can begin to understand culturally significant variation. The spatial dimension can be controlled by recording the provenience of manufacture, use, or deposition. Variation due to time is understood by the establishment of a fine chronology based on absolute or relative dating methods. Variation that does not correspond to the dimensions of time and space is either idiosyncratic or purely cultural. Idiosyncratic variation tends toward randomness and accounts for the extent of the range of variation. Idiosyncratic variation may also foreshadow the direction of culture change since an individual's unique behavior in one period may become the cultural mode in the next. The range of variation in any sample reflects both the permissible cultural variation and any impression of the spatial and temporal dimensions that may be present.

Second, it is accepted that people possessing the same culture are able to interact and communicate with some degree of success. This success can only be had if the cultural categories being dealt with are discrete and have similar meanings for all participants. This second premise provides the anthropologist with a method for reconstructing culturally significant categories when no informants are available. For discreteness to have been maintained, attributes that consistently distinguish the categories must exist. Where the distinguishing feature is purely the existence or lack of a single attribute, it is difficult to be certain that the feature truly distinguishes cultural categories. Most frequently, however, two or more unrelated attributes consistently distinguish categories, and one can be relatively certain that the categories were distinguished within their original cultural context. When the attributes are size, form, number, color, or any other dimension that can be placed along a lineal scale, one can recognize the distinctive features by plotting their frequency of occurrence along that scale. If distinct modes occur along the continuous scale, one can assume that the range of variation that separates the modes was intentionally avoided in order to maintain the discreteness of the categories. Discreteness is derived by the avoidance of ambiguity, e.g., a table is generally distinct from any chair. A study of the physical dimensions and attributes of many tables and chairs will reveal one or more that can be used to distinguish them. Different sets of dimensions or attributes may establish subcategories of the initial division, e.g., card tables,



dinner tables, coffee tables, etc. These culturally significant categories are called modes. In this paper modes are designated by capital letters.

A single Santa María vessel form is utilized in this study in order to limit variation due to function. Burial urns are uniform in shape, they served a single function, and they carry the most complex designs of any Santa María vessels. Decorative fields are equivalent on most urns, and only a relatively few distinct varieties of decoration occur in each field.

### TIME AND SPACE

As discussed above, in order to study culturally significant variation, the dimensions of time and space must first be adequately described. The spatial variation can be controlled by taking note of the provenience in which vessels were found and by restricting the area from which the sample to be studied is obtained. Here this is done by limiting the sample to a 60-mile section of the Yocavil River valley (fig. 1). The sample used in this study is the same as the one that was used in the initial Santa María seriation (Weber, 1978). Included are urns of the Zavaleta collection housed at Field Museum of Natural History and other urns with known provenience that have been illustrated in the literature (see Appendix). Like the Zavaleta collection, which was dug from the ground in the early 1900's, most of these vessels lack adequate archaeological context. Recent archaeological excavations have provided better contexts and associational data, but there is a lack of sufficient illustrated examples to aid in iconographic studies.

Within the geographical area where Santa María urns have been found, no spatially related patterning of attributes has been recognized. All of the varieties of urn forms, as well as types of designs and design layouts, are found relatively evenly spread over the whole occupied area. Therefore, I believe that a single zone of human interaction is being dealt with. Table 1 shows the distribution of specific urns in both space and time. The vertical axis records the code numbers by which specific urns are identified in this paper; they also correspond to the numbers used in my 1978 seriation (Weber, 1978). The horizontal axis records the site from which the urns were collected. The sites are ordered such that the ones on the left have urns only of the latest phases, whereas the sites on the right also have urns of the earliest phase. The dotted lines that run horizontally across the chart separate the chronological phases.

Variation over time is described by a five-phase chronological seriation (Weber, 1978). Table 2 is a systematic representation of the attributes of each of the five phases. I have not considered phase "0," which has been added to the original sequence by Clara Podestá and Elena B. de Perrotta, because I am lacking a representative sample (Perrotta & Podestá, 1973; Podestá & de Perrotta, 1973). In this paper, any examples of phase "0" that may exist are lumped within phase I. The shape of the urns is the most diagnostic feature for differentiation of the phases; however, decorative features also change. Designs shift from tricolor to bicolor and from compositions using painted areas to define regular nonpainted areas, to compositions with less regularly painted designs and irregular areas separating the designs. Designs of the late phases are composed of lineal elements. Basic design layouts gradually shift through time, but the distinct modes of design persist.

# SANTA MARIA SITES

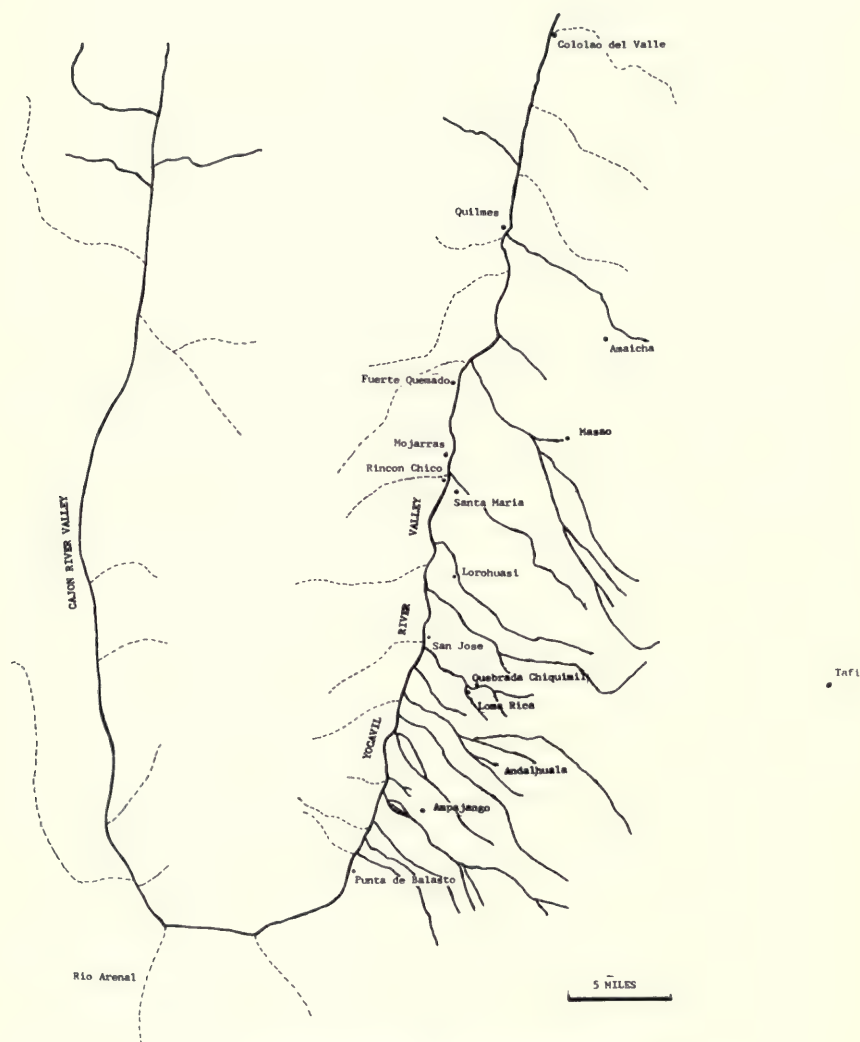


FIG. 1. Map of Santa María sites in Argentina.

TABLE 1. Provenience of urns.

Specimen code No.	Ampajango	Rincón Chico	Loma Rica	Lorohuasi	Punta de Balasto	San José	Mojarras	Quebrada Chiquimil	Masao	Amaicha	Andalhuala	Quilmes	Fuerte Quemado	Tafi	Cololao del Valle	Santa María Dept.	Rio de Arenal
Phase V																	
1																	
2																	
3																	
4																	
5	x																
6																	
7		x											x				
8						x											
9		x															
10			x														
11															x		
12															x		
13																	
14								x									
Phase IV																	
15						x											
16																	
17										x							
18																	
19												x					
20							x						x				
21				x													
22					x												
23																x	
24					x												
25					x												
26					x												
27					x												
28										x							
29						x											
30																	
31															x		
32																	
Phase III																	
32																	
34								x									
35								x									
36																	
37							x										
38										x							
39												x					
40						x						x					
41													x				
42															x		
43																	
47													x				
48																	
49													x				
52																	
59															x		
63																x	
64																x	
100																	
101																	
102														x			
104																	

TABLE 1. *Continued.*

Specimen code No.	Ampajango	Rincón Chico	Loma Rica	Lorohuasi	Punta de Balasto	San José	Mojarras	Quebrada Chiquimil	Masao	Amaicha	Andalhuala	Quilmes	Fuerte Quemado	Tafi	Cololao del Valle	Santa Maria Dept.	Rio de Arenal
<b>Phase II</b>																	
44																	
45																	
46																	
50												x					
51									x								
53																	
54																	
57												x					
58										x							
60																x	
62																	
66																x	
67																	
68															x		
69															x		
70										x							
71																x	
72												x					
73																	
76															x		
77														x			
78												x					
83													x				
86									x								
88																x	
89																x	
98										x							
99											x						
103																	
<b>Phase I</b>																	
55																	
56																x	
61													x				
65													x				
74															x		
75																	
79										x							
80										x							
81																x	
82														x			
84										x							
85												x					
87													x				
90																	
91																x	
92										x							
93																x	
94										x							
95																	
96										x							
97																	
105																	x
106																	



TABLE 2. Attributes of the five phases of Santa Maria.

Phases	BODY FORM	BASE FORM	NECK FORM	INTERNAL BAND	LATERAL DESIGN	COLOR	RELIEF BROWS & ARMS	LATERAL ADORNMENTS	DESIGN TECHNIQUE	NECK ANGLE	NECK / BODY PROPORTION
V	( )					bicolor	none	occur	lines	160° to 180°	1.4 or more
IV	( )					bicolor	none	none	lines	140° to 160°	1 to 1.4
III	( )					tricolor	occurs	none	areas of paint	140° to 160°	1
II	( )					tricolor	relief	none	areas of paint	140° to 160°	less than 1
I	( )					tricolor	relief	none	negative paint	140° or less	less than 1

## ICONOGRAPHY (CULTURAL ANALYSIS)

## VESSEL BODY DESIGNS

During any one phase of the Santa María tradition, there are only two frequently occurring design layouts on the lower half or body of the urns. One of these, here given the designation variety 1, occurs throughout the Santa María temporal sequence and consists of circle-like zones defined by upcurving arms and hands. Clay strips form the arms, and a cuplike form is clasped in the hands during the earlier phases. The arms are represented by paint, and the cup is omitted in later phases. The form of the bottom of vessels (which resembles a *puco* bowl) decorated with design variety 1 is always treated as a separate design field (fig. 2, variety 1).

In variety 2, a zone of design extending up the center of the body divides the design field into two flanking zones to give an expression of verticality (fig. 2, variety 2). Neither painted nor applique arms are applied to variety 2. The body and *puco*-like bottom segment are treated as a single design field. In the late part of phase III, body design variety 3 appears in which the *puco*-like form is treated

Variety 1



Variety 2



Variety 3



FIG. 2. Body design varieties.

as a separate design zone (fig. 2, variety 3). Table 3 shows that variety 3 first appears in phase III and replaces variety 2 in phases IV and V (table 3). The oppositional relationship between varieties 1 and 2 which occurs in the early phases is maintained in the late phases only if one recognizes that the variety of body painting illustrated in Figure 2, variety 3, evolves from the body painting of Figure 2, variety 2. Podestá & de Perrotta (1973) decided that the inclusion or exclusion of the *puco*-like form in the design field was the significant variable, whereas I suggest that the occurrence of the upcurving arms or the vertical design zone are actually the culturally significant variables. If one were to accept the interpretation of Podestá & de Perrotta that varieties 1 and 3 are the same, one would need to explain the loss of variety 2 and the bifurcation of variety 1 in the late phases. With the simpler interpretation presented here, two modes of design are found throughout the temporal sequence: mode A, represented by variety 1, and mode B, consisting of varieties 2 and 3. I propose that the two modes are representative of a sexual dichotomy: mode A being the female with the upcurving arms defining the breasts, and mode B representing the male. Further support for this interpretation will be presented after discussion of neck and nose designs and their relationship to the two modes of body design layouts.

#### VESSEL NECK DESIGNS

Design layouts of vessel necks are more greatly varied than body designs. Eighteen varieties of neck design have been recognized in the sample of urns studied in this paper (see fig. 3). The first two varieties consist of two rows of triangular or step designs with attached frets separated by a lineal divider that is usually filled with dots. The design is reflected along a vertical axis. The degree of slope of the divider appears to be an insignificant variation within the range of a single mode. Varieties 3 and 4 probably relate to this design mode, and variety 5 is a late version of neck design mode A. Through time, the pitch of the diagonal divider increases with the lengthening of the neck of the vessel, and the dots within the divider become representational forms. In Quiroga's analysis of the cross in America, he identifies these dots as being symbolic of rain drops, and he associates the rhea as the bringer of rain clouds (Quiroga, 1942). It is therefore logical that the dots of the early mode A design varieties 1 and 2 be replaced by bird representations (variety 5), with little or no change in the symbolic value of the design zone.

Neck layout variety 6, which represents a running rhea in the form of a scroll, is clearly distinct from all varieties of mode A. Variety 7 appears to be a later version of the same rhea bird representation. The spiralling split head of the snake design of variety 8 is closely parallel in form to the body of the rhea scroll of variety 6, and the body of the snake scroll extends upward in the same curving way as the neck of the rhea. The snake head such as the one in variety 8 is produced by symmetrically reflecting the center element of the body of the rhea scroll. Supporting this interpretation is the rhea scroll of one of the vessels (code No. 76), which is composed of a complete split-headed snake. Compare varieties 8 and 6 of Figure 3. At present there are too few examples of varieties 9, 10, 11, and 12 to be fully secure about their relationship to other varieties; however, varieties 9 and 10 also appear to be late variants of mode B as is suggested by a comparison of their curving forms with varieties 6 and 8 of this mode. The crosshatched and checkerboard designs such as seen on varieties 11 and 12 frequently occur on the bodies of rheas portrayed on Santa María urns. One also

TABLE 3. Temporal distribution of body designs.

Specimen code No.		Variety			Specimen code No.		Variety		
		1	2	3			1	2	3
Phase V	1	x			Phase II	44			
	2	x				45		x	
	3					46		x	
	4	x				50		x	
	5	x				51		x	
	6					53		x	
	7	x				54		x	
	8	x				57			
	9					58			x
	10			x		60			
	11	x				62	x		
	12					66	x		
	13					67		x	
	14	x				68			
Phase IV	15				Phase I	69		x	
	16					70			
	17	x				71		x	
	18					72		x	
	19	x				73			
	20	x				76		x	
	21			x		77	x		
	22			x		78	x		
	23			x		83		x	
	24			x		86	x		
	25			x		88	x		
	26			x		89		x	
	27			x		98	x		
	28	x				99		x	
	29	x				103		x	
	30	x			Phase I	55			
Phase III	31	x				56	x		
	33	x				61		x	
	32	x				65	x		
	34					74		x	
	35			x		75		x	
	36	x				79	x		
	37	x				80	x		
	38	x				81	x		
	39					82	x		
	40		x			84			
	41	x				85	x		
	42	x				87		x	
	43		x			90		x	
	47		x			91		x	
	48	x				92			
	49	x				93		x	
	52	x				94		x	
	59	x				95			
	63	x				96		x	
	64		x			97			
	100	x				105		x	
	101	x				106	x		
	102	x							
	104	x							



Variety 1



Variety 2



Variety 3



Variety 4



Variety 5

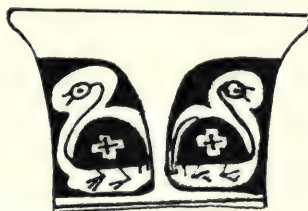


FIG. 3. Neck designs of mode A.

Variety 6



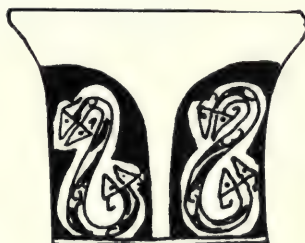
Variety 7



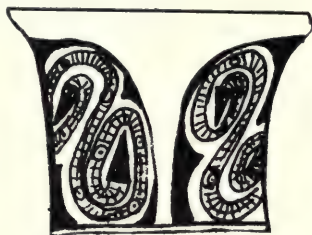
Variety 8



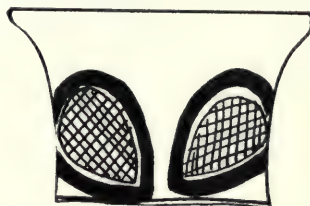
Variety 9



Variety 10



Variety 11



Variety 12

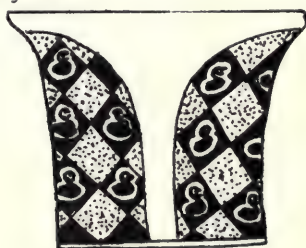


FIG. 3. Neck designs of mode B.

Variety 13



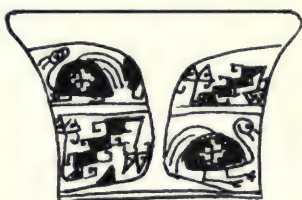
Variety 14



Variety 15



Variety 16



variety 17



Variety 18



FIG. 3. Neck designs of mode C.

finds cross and checkerboard designs occasionally substituted for the rhea in the opposed quadrants of design mode C (see vessel No. 36 of fig. 4).

Neck design varieties 13 through 17 are characterized by a rotational-type symmetry. Designs on opposite cheeks are inverted so that the elements that are above on one side are below on the other (fig. 3, varieties 13–17). Varieties 13 and 14 occur in the earliest phases, variety 15 appears to evolve from varieties 13 and 14, and varieties 16 and 17 are late phase III versions of the basic design. These five varieties represent a continuous range of temporal variation; they appear to have the same symbolic value and are considered to be members of a single mode as it evolved through time. Variety 18 only occurs in the late phases where no other examples of mode A occur. A phase III vessel (code No.



FIG. 4. Vessel No. 36 with a variant of body mode A and neck design combining varieties 13 and 18.

36) supports the hypothesis that varieties 13 through 17 of mode C evolved into variety 18. The asymmetrical neck layout of this vessel consists of one side with designs similar to variety 13 of mode C, and the other side is like variety 18 (fig. 4). The decoration on the tunics of the opposed anthropomorphic figures of variety 18 is usually different, which suggests the asymmetrical quality of the first five varieties (13-17) of mode C.

During phases I through III of the Santa María seriation, three frequently occurring modes of neck decoration can be recognized (table 4). These varieties include the step-fret varieties 1 and 2, the scroll of varieties 6 and 8, and the rotational arrangement of varieties 13-17.

Phase IV is dominated by variety 18, which is probably symbolically related to mode C. Phase V again has at least three varieties of neck design that probably correspond to the three varieties of the first three phases.

Modes A and B of the neck designs are clearly distinct. Mode A is largely rectilinear and contrasts with the largely curvilinear mode B. Both sides of neck design modes A and B are symmetrical mirror reflections. Mode C is more complex and is composed of elements that are rectilinear, such as mode A, and other elements that are curvilinear, such as mode B. Mode C is thus in some ways a composite of both modes A and B, but is produced using rotational-type

TABLE 4. Temporal distribution of neck designs.

Specimen code No.		Neck design varieties																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Phase V	1					x													
	2					x													
	3																		
	4					x													
	5																		
	6																		
	7					x													
	8																		
	9																		x
	10																		x
	11												x						x
	12										x								
	13										x								
	14					x													
Phase IV	15																		
	16																		
	17																		
	18																		x
	19																		x
	20																		x
	21																		x
	22																		x
	23																		x
	24																		x
	25																		x
	26																		x
	27																		
	28									1/2									
	29																		
	30															x			
	31	x																	
	33																		
Phase III	32		x																
	34																		
	35									x									
	36		1/2									1/2							
	37					x													
	38												x						
	39																		
	40							x											
	41																	x	
	42																x		
	43			x															
	47	x																	
	48																		
	49															x			
	52		x													x			
	59																		
	63	x																	
	64																x		
	100																x		
	101																		
	102	1/2							1/2										
	104															x			



TABLE 4. *Continued.*

Specimen code No.		Neck design varieties																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Phase II	44																		
	45	x																	
	46																		
	50			x															
	51															x			
	53															x			
	54		x																
	57		x																
	58											x							
	60																		
	62	x																	
	66						x												
	67			x															
	68																		
	69				x														
	70																		
	71															x			
	72	x																	
	73																		
	76						x												
77			x																
78			x																
83						x													
86						x													
88																			
89	x																		
98																			
99															x				
103								x								x			
Phase I	55																		
	56		x																
	61																		
	65	x							x										
	74	x																	
	75	x																	
	79																		
	80											x							
	81																		
	82													x					
	84															x			
	85																x		
	87						x												
	90		x																
	91		x																
	92																		
	93	x																	
	94	x																	
	95																		
	96						x												
97																			
105	x																		
106								x											

symmetry. I suggest that this type of symmetry was used with mode C in order to avoid any hierarchical ordering of modes A and B when combined, such as in mode C.

Table 5 demonstrates that during phases I–IV there was no observable relationship between the design layouts of the two decorative zones of the urns. Each of the body designs occurs with about equal frequency with any of the neck designs. However, in phase V, body design mode A and neck design variety 5 do appear to be associated. This association may be a result of the small representation of mode B bodies in phase V, but it may as well represent a real shift in the significance of the iconography, paralleling the stress that must have led to the termination of the production of Santa María vessels. It is important to note that phase V begins with influences brought on by the Inca conquest of the Santa María culture and appears to end with the Spanish conquest of the Diaguita.

#### VESSEL NOSE DESIGNS

There are two varieties of nose designs that can be recognized regularly on Santa María urns. Variety 1 consists of two arching brows that come together to form the nose. Variety 2 is defined by its greater rectangularity and its serrated edges that form a diamond-like negative design (fig. 5). Table 6 shows that these two varieties of nose design occur through phases I to III. No examples of variety 2 are known in phases IV or V. There is a direct association between nose variety 2 and body design mode B, and as we should expect, no regular correspondence exists between nose and cheek painting. Apparently the two varieties of nose design were utilized by Santa María artists to create a symmetrical relationship between the opposed body and face designs. The arching arms of body design mode A are reflected by the arching-type brows, and the central, parallel-sided, vertical motif of body layout mode B is frequently reflected by the rectilinear variety 2 nose. The symmetrical arrangement of the urns is completed if we consider that the *puco*-shaped bottom of body layout mode A would be reflected by an inverted *puco* that served as a lid. Vessels of body layout mode B may be a variety of urn that is occasionally recorded as having only a flat stone serving as a lid (fig. 6, mode B).

Santa María iconography is most stable during the three earliest phases. Changes in the iconography of phases IV and V reflect other changes that are known to have occurred in Santa María culture. Fortified hilltop towns that are associated with bicolor pottery relate to phase IV, whereas a period of Inca domination marks phase V. The Inca domination may have led to a restructuring of Santa María culture, resulting in the loss of the significance of categories that were being represented in the iconography.

During phases I through III, there are three modes of neck designs that occur with either of the two modes of body designs. No association between neck design and body design can be recognized. It is argued here that the bi-modality of body design and the tri-modality of neck design could not have persisted through time without having cultural significance. This significance would necessarily be more than the arbitrary recognition that there were two ways to paint an urn's body and three ways to decorate the neck. The two-part division is most suggestive of a sexual distinction, mode A being female with upcurving arms defining breasts and mode B being male. The horizontal nature of the female design possibly results from the horizontal warp facing of skirts. The

TABLE. 5. Intersection of varieties of body designs with neck designs.

Neck design varieties	Body design varieties					
	1		2		3	
1.	31 65	63 62			47 45 72 74 75 93 94 105 89	
2	32 37 78	101 56 52 77			53 54 72 90 91 84	
3					43 46 67	
4	88				69	
5	1* 4*	7* 2* 14*				
6	66 86				76 83 96 87	
7					40 103	
8	106				61	
9			35			
10	12* 13*					
11	80		57			
12	11* 38					
13	79 81					
14	98 82 85 60					
15	30 100	48 59 104			64 50 51 49 71 99	

TABLE. 5. *Continued*

Neck design varieties	Body design varieties		
	1	2	3
16	42		
17	41		
18	8*   9* <u>17</u> <u>19</u> <u>20</u>	10* <u>21</u> <u>22</u> <u>23</u> <u>24</u> <u>25</u> <u>26</u> <u>27</u>	

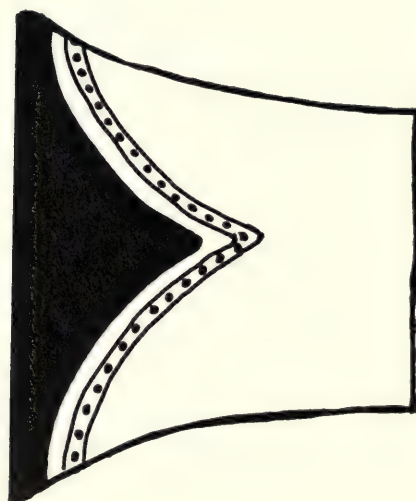
Arabic numerals within the grid are vessel code numbers. Code numbers that are underlined are of phase IV; those with an asterisk are of phase V. Vessels 5, 15, 16, 28, 29, 33, 58, and 102 have not been classified.

vertical nature of designs on male urns may then be due to the vertical position of the warp facing of *ponchos*, the characteristic attire of men. The orientation of these characteristic pieces of clothing determines the direction of the warp strands. A weaver using the typical back strap loom can comfortably weave a cloth 2.5–3.5 ft wide and of any length. The relatively narrow width is not sufficient to make the widest dimension of skirts, which is the horizontal dimension, nor is it sufficient to produce the longest dimension of *ponchos*, which is the vertical dimension. Observation of dress patterns among the Panoan-speaking peoples of eastern Peru supports this hypothesis. The tubular skirts of Shipibo and Conibo women always show a horizontally placed warp-faced design, whereas men's *cushmas* always display a vertical design. I believe that this male-female, vertical-horizontal relationship has broad applicability throughout South America, but is particularly significant within the cultures of the eastern flank of the Andes.

This male-female dichotomy might be indicative of the sex of the infant buried within the urns or possibly the sex or manifestation of the deity to whom the urns were dedicated. Alternatively, two moieties, an upper world and under world, a wet and dry season, or a combination of these might be represented. Investigations of immediate provenience and careful analysis of contents of urns may reveal further evidence that would clarify the significance of the two-part, male-female opposition. I believe that studies of skeletal material found within the urns and burial mounds or a comparative study of the quantity and quality of pollen contained within the urns may show a pattern paralleling the design layouts of the bodies.

The decoration from the necks of the urns is symbolic of face painting. In South America, such face painting indicated tribal membership, sex, societal affiliation, or class status (Steward, 1963, p. 671). Assuming that tribal membership means the localization of groups, we can be sure that the painting on the necks of Santa María urns was not a marker of tribal membership. Table 7 shows that there is no correspondence of neck design and the location of sites. Whenever a neck design occurs more than once in the sample, two or more sites are represented. This is not the pattern that one would expect if tribal mem-

Variety 1



Variety 2



FIG. 5. Nose design varieties 1 and 2.



TABLE 6. Temporal distribution of nose designs.

	Specimen code No.	Body design varieties			Nose design varieties			Specimen code No.	Body design varieties			Nose design varieties	
		1	2	3	1	2			1	2	3	1	2
Phase V	1	x			x		Phase II	44					
	2	x			x			45		x			x
	3							46		x			x
	4	x			x			50		x		x	
	5	x			x			51		x		x	
	6							53		x		x	
	7	x			x			54		x		x	
	8	x			x			57				x	
	9							58			x	x	
	10			x	x			60					
	11	x			x			62	x			x	
	12				x			66	x			x	
	13				x			67		x		x	
Phase IV	14	x			x		Phase II	68					
	15							69		x		x	
	16							70					
	17	x			x			71		x			
	18							72		x		x	
	19	x			x			73					
	20	x			x			76		x		x	
	21			x	x			77	x			x	
	22			x	x			78	x			x	
	23			x	x			83		x		x	
	24			x	x			86	x			x	
	25			x	x			88	x				
	26			x	x			89		x		x	
Phase III	27			x	x		Phase I	98	x			x	
	28	x			x			99		x			x
	29	x			x			103		x			x
	30	x			x			55					
	31	x			x			56	x			x	
	33	x			x			61		x		x	
	32	x						65	x			x	
	34				x			74		x		x	
	35			x	x			75		x		x	
	36	x			x			79	x			x	
	37	x			x			80	x			x	
	38	x				x		81	x				
	39				x			82	x			x	
	40		x			x		84					
	41	x			x			85	x			x	
	42	x			x			87		x		x	
	43		x			x		90		x		x	
	47		x			x		91		x		x	
	48	x			x			92					
	49	x			x			93		x		x	
	52	x			x			94		x		x	
	59	x			x			95					
	63	x			x			96		x		x	
	64		x		x			97					
	100	x			x			105		x			x
	101	x			x			106	x			x	
	102	x			x								
	104	x			x								

Vessel mode A



Vessel mode B



FIG. 6. Body modes A and B with corresponding nose designs.

bership were being represented. The painting does not indicate sexual differences, because there are three or more modes of painting which crosscut the sexual dichotomy of the body decoration. The best explanation for the painting on the necks of the urns is that it indicates social affiliation or class status. Either or both of these categories would crosscut the male and female symbolism of the bodies of the urns and would not tend to be spatially distinct.

A comparison with ethnographic data on face painting of the Mbayá Caduveo gives us some hint into one possible interpretation of the meaning of the decoration (Lévi-Strauss, 1974, pp. 183-193). The variety of painting most frequently illustrated for the Caduveo is nearly identical to varieties 16 and 17 of Santa María neck painting mode C. Triangles in the two opposed quadrants are recognizable, whereas the other two quadrants clearly depict rhea scrolls (fig. 7). The Caduveo came from an area to the north of the Diaguíta, but it is likely that they were culturally related. Mbayá Caduveo face painting was used to discriminate ranked social classes, and the Diaguíta painting may also have pertained to similar-ranked social groups. Caduveo were organized into three castes: two castes of nobles and a caste of warriors (Lévi-Strauss, 1974, p. 180).

Caduveo women employed two styles of painting: one that could be characterized as curvilinear, the other angular and geometric (Lévi-Strauss, 1974, p. 190). Occasionally the two styles were combined. These three modes of Caduveo painting exactly parallel the three modes of painting that occur on the necks of

TABLE 7. Provenience of neck design modes.

	Ampajango	Rincon Chico	Loma Rica	Lorehuasi	Punta de Balasto	San Jose	Mojarras	Quebrada Chiquimil	Masao	Anaicha	Andalhuata	Quilmes	Fuerte Quemado	Iafi	Cololao del Valle	Santa Maria Dept.	Rio de Arenal
1												72	47 65		74	31 63 93	105
2										37		32 78		77	52	56 89	
3		9	10	21	22 26 24 25 27	8	20	34		17			19			23	
4															69		
5	5	7											4		2		
6									86				83 92	76			
7						40											
8													61				
9								35									
10												57		12			
11										80			94				
12												38					
13										79							
14														82			
15									51				49		30	64	
16																	
17													41				
18												46					

Santa María burial urns. Angular designs are of face painting mode A; the curvilinear designs are of mode B. The two patterns are combined using a rotational-type symmetry to form Santa María neck design mode C. In Santa María painting, we can speculate that the angular design mode A and the curvilinear design mode B represent the two opposed noble classes. Perhaps the warrior class was painted with a combination of the two noble designs. The dominance of this latter type of face painting in phase IV possibly relates to the militarism reflected by the fortified cities that appear in this phase. It was at this time that the Inca began their conquest of northwestern Argentina.

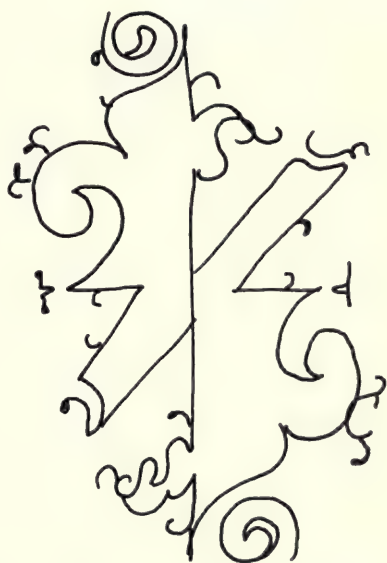
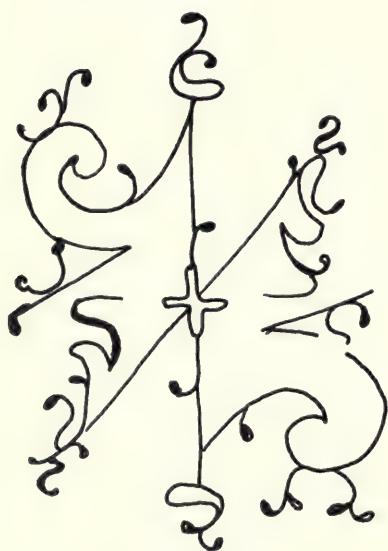


FIG. 7. Caduveo face painting patterns. Adapted from Lévi-Strauss, 1974, figs. 14, 15, 24, and 25.



## CONCLUSIONS

This paper demonstrates that a pattern of design relationships occurs on Santa María burial urns. Each of two modes of body decoration occurs about equally frequently, with three or more modes of neck painting in the three earliest phases of the Santa María sequence. This pattern of distribution loses its clarity in the fourth phase of the chronology and rapidly disappears with the imposition of the Inca social hierarchy that marks the beginning of phase V. It is postulated that the distribution represents a male-female opposition crosscut by three high-ranking classes. One of these classes, mode C, is possibly a warrior class. It remains for archaeologists working in northwest Argentina to analyze meticulously the contents and associations of the urns to establish securely the significance of the pattern and to verify or negate the hypothesis presented here. It is hoped that the methodology utilized in this analysis can be applied to other cultural traditions with success.



FIG. 8. Phase V urns from the Zavaleta collection, Field Museum of Natural History.

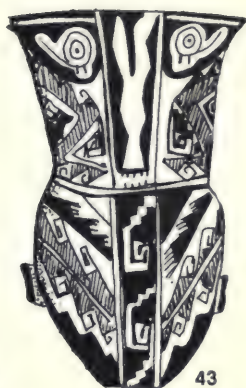




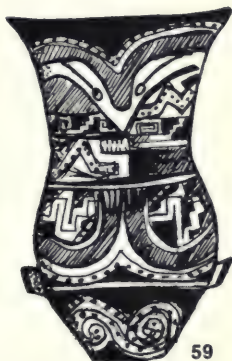
FIG. 9. Phase IV urns from the Zavaleta collection, Field Museum of Natural History.



42



43



59



37



52

FIG. 10. Phase III urns from the Zavaleta collection, Field Museum of Natural History.



76



44



77



69



58



57

FIG. 11. Urns 77 and 76 are of phase II. Urns 44, 69, 58, and 57 are best placed in phase II, but each has some phase I characteristics. From the Zavaleta collection, Field Museum of Natural History.



96



74



75



84



82



94

FIG. 12. Phase I urns from the Zavaleta collection, Field Museum of Natural History.



## APPENDIX

List of specimens and figures utilized in this paper and their origins (FMNH = Field Museum of Natural History).

1. Provenience not known, FMNH (102232).
2. Quilmes, Cololao del Valle, FMNH (102234).
3. Tafi, FMNH (102267).
4. Fuerte Quemado (Bruch, 1913, p. 96; Bregante, 1926, p. 18).
5. Ampajango (Márquez Miranda, 1936, p. 315).
6. Fuerte Quemado (Bruch, 1913, p. 91).
7. Rincón Chico (Márquez Miranda & Cigliano, 1961, p. 192).
8. San José (Quiroga, 1942, p. 188).
9. Rincón Chico (Márquez Miranda & Cigliano, 1961, p. 192).
10. Loma Rica (Quiroga, 1942, p. 188).
11. Tafi, FMNH (102261).
12. Tafi, FMNH (102247).
13. Provenience not known, FMNH (102249).
14. Quebrada Chiquimil (Márquez Miranda, 1946, p. 158).
15. San José (Quiroga, 1942, p. 140; Levillier, 1964, p. 248).<sup>1</sup>
16. Tafi, FMNH (102270), probably the same as vessel 15.<sup>1</sup>
17. Amaicha, FMNH (102271).
18. Cololao del Valle, FMNH (102227).
19. Fuerte Quemado, FMNH (102238).
20. Mojarras (Márquez Miranda, 1946, p. 149).
21. Lorohuasi (Márquez Miranda, 1946, p. 149).
22. Punta de Balasto (Cornley, 1956, p. 43; Márquez Miranda, 1936, p. 321; 1963, p. 643).
23. Santa María (Quiroga, 1942, p. 154).
24. Punta de Balasto (Márquez Miranda, 1936, p. 318; 1963, p. 643).
25. Punta de Balasto (Márquez Miranda, 1936, p. 308; 1963, p. 643).
26. Punta de Balasto (Márquez Miranda & Cigliano, 1957, pl. II).
27. Punta de Balasto (Márquez Miranda, 1936, p. 320; 1963, p. 643).
28. Amaicha, FMNH (102263).<sup>2</sup>
29. San José (Quiroga, 1942, p. 225) probably the same as vessel 28.<sup>2</sup>
30. Quilmes, Cololao del Valle, FMNH (102246).
31. Santa María (Quiroga, 1942, p. 225).
32. Quilmes (Lafone Quevedo, 1908, p. 327; Quiroga, 1942, p. 129).
33. Provenience not known, FMNH (102287).
34. Quebrada de Chiquimil (Márquez Miranda, 1946, p. 156).
35. Quebrada de Chiquimil (Márquez Miranda, 1946, p. 155).
36. Mojarras (Márquez Miranda & Cigliano, 1957, pl. II).
37. Amaicha, FMNH (102237).
38. Quilmes (Lafone Quevedo, 1908, p. 327; Quiroga, 1942, p. 128).
39. Quilmes (Bruch, 1913, p. 39).
40. San José (Quiroga, 1942, p. 129).
41. Fuerte Quemado (Lafone Quevedo, 1908, p. 327; Quiroga, 1942, p. 131).
42. Quilmes, Cololao del Valle, FMNH (102256).
43. Provenience not known, FMNH (102242).
44. Provenience not known, FMNH (102229).
45. Yocavil Valley (Boman, 1908, p. 158, pl. II).
46. Quilmes (Bruch, 1913, p. 37; Serrano, 1938, pl. XVIII; Márquez Miranda, 1946, p. 156; Bennett et al., 1948, p. 53).
47. Fuerte Quemado (Bruch, 1913, p. 94).
48. Yocavil Valley (Boman, 1908, p. 158, pl. IV).
49. Fuerte Quemado (Bruch, 1913, p. 95).

<sup>1</sup> Specimens 15 and 16 appear to be the same urn. If only one urn is represented, there is an error in the provenience of one.

<sup>2</sup> Urns 28 and 29 are identical in all respects and appear to be a single urn. If they are the same, an error in provenience exists.



50. Yocavil (Boman, 1908, p. 158, pl. IV).
51. Masao (Márquez Miranda & Cigliano, 1957, pl. I).
52. Cololao del Valle, FMNH (102236).
53. Yocavil (Boman, 1908, p. 158, pl. V).
54. Yocavil (Boman, 1908, p. 158, pl. V).
55. Fuerte Quemado (Bruch, 1913, p. 97).
56. Santa María (Lafone Quevedo, 1908, p. 325; Bregante, 1926, p. 15; Bennett et al., 1948, p. 53).
57. Quilmes, Cololao del Valle, FMNH (102291).
58. Amaicha, FMNH (102233).
59. Provenience not known, FMNH (102230).
60. Santa María (Quiroga, 1942, p. 142).
61. Fuerte Quemado (Silvetti, 1952, p. 96, pl. VI).
62. Yocavil (Boman, 1908, p. 158, pl. IV; Bregante, 1926, p. 14; Bennett et al., 1948, p. 53).
63. Santa María (Posnansky, 1957, pl. LXIc).
64. Santa María (Posnansky, 1957, pl. LIXb).
65. Fuerte Quemado (Márquez Miranda 1946, p. 155).
66. Yocavil (Boman, 1908, pl. V).
67. Santa María (Serrano, 1947, p. 32).
68. Quilmes, Cololao del Valle, FMNH (102265).
69. Quilmes, Cololao del Valle, FMNH (102244).
70. Amaicha, FMNH (102259).
71. Santa María Valley (Serrano, 1947, p. 32).
72. Quilmes (Bruch, 1913, p. 37; Bregante, 1926, p. 19; Serrano, 1938, pl. XVIII; Bennett et al., 1948, p. 53).
73. Quilmes, Cololao del Valle, FMNH (102240).
74. Quilmes, Cololao del Valle, FMNH (102257).
75. Provenience not known, FMNH (102290).
76. Tafi, FMNH (102254).
77. Tafi, FMNH (102228).
78. Quilmes (Bruch, 1913, p. 37; Serrano, 1938, pl. XVIII).
79. Amaicha, Museum of the American Indian, Heye Foundation (8/8921).
80. Amaicha (Canals Frau, 1953, p. 480).
81. Santa María (Márquez Miranda, 1963, pl. 141).
82. Tafi, FMNH (102258).
83. Fuerte Quemado (Bruch, 1913, p. 98; Bregante, 1926, p. 20).
84. Amaicha, FMNH (102251).
85. Quilmes (Bruch, 1913, p. 37; Serrano, 1938, pl. XVIII; Bennett et al., 1948, p. 53).
86. Masao (Márquez Miranda, 1936, p. 312; 1963, pl. 141; Márquez Miranda & Cigliano, 1957, pl. I).
87. Fuerte Quemado (Quiroga, 1942, p. 133).
88. Santa María Valley (Serrano, 1947, p. 32).
89. Santa María Valley (Serrano, 1947, p. 32).
90. Provenience not known, FMNH (102288).
91. Santa María (Lafone Quevedo, 1908, p. 380).
92. Amaicha (Bregante, 1926, p. 20; Quiroga, 1942, p. 133).
93. Santa María (Lafone Quevedo, 1908, p. 317; Bennett et al., 1948, p. 53).
94. Amaicha, FMNH (102241).
95. Provenience not known (Wagner & Wagner, 1934, p. 321).
96. Amaicha, FMNH (102264).
97. Provenience not known, FMNH (102252).
98. Amaicha, FMNH (102260).
  - a. Dist. of El Paraíso, Amaicha, FMNH (100766).
99. Andalhuala (Márquez Miranda, 1946, p. 157).
100. Provenience not known (Lafone Quevedo, 1908, p. 327).
101. Provenience not known (Lafone Quevedo, 1908, p. 384).
102. Tafi (Bregante, 1926, p. 139; Quiroga, 1942, p. 139).
103. Provenience not known (Márquez Miranda, 1936, p. 212).
104. Provenience not known (Lafone Quevedo, 1908, p. 333).

105. Rio de Arenal (Lafone Quevedo, 1908, p. 325).
106. Provenience not known (Wagner & Wagner, 1934, p. 441).

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